

Chemistry Pacing Guide

# of Days	Standards	Essential Standards	Topics	Resources
5	Math		UNIT 1: Math of Chemistry <ul style="list-style-type: none"> Significant figures Scientific notation Conversions 	<ul style="list-style-type: none"> Calculators Metric rulers Various objects Lab equipment
5-7	Chm 2.1.2 Chm 2.1.3 Chm 2.1.4 Chm 2.1.5	Chm.2.1 Understand the relationship among pressure, temperature, volume and phase	UNIT 2: Physical Properties <ul style="list-style-type: none"> Heating and cooling curves Phase diagrams Specific heat Relationships between pressure, temperature and volume of gas 	<ul style="list-style-type: none"> Reference table Calculators Heating and cooling curves Phase diagram
7	Chm 1.1.1 Chm 1.1.2 Chm 1.1.3	Chm.1.1 Analyze the structure of atoms and ions	UNIT 3: Basic Atomic Structure <ul style="list-style-type: none"> Atoms, ions and isotopes Electron location Electromagnetic spectrum (Bohr model) 	<ul style="list-style-type: none"> Reference table Modeling kit Hoffmann apparatus Flame test kit
5-7	Chm 1.3.1 Chm 1.3.2 Chm 1.3.3	Chm.1.3 Understand the physical and chemical properties of atoms based on their position in the periodic table	UNIT 4: Periodic Table <ul style="list-style-type: none"> Components Physical properties Periodic trends 	<ul style="list-style-type: none"> Reference table Blank periodic tables Samples of representative elements Graphing supplies or graphing software Tables of ionization energy and electronegativity
10	Chm 1.2.1 Chm 1.2.2 Chm 1.2.3 Chm 1.2.4 Chm 1.2.5	Chm.1.2 Understand the bonding that occurs in simple compounds in terms of bond type, strength, and properties.	UNIT 5: Bonding <ul style="list-style-type: none"> Ionic, covalent and metallic bonds Bond types and forces Chemical formulas/IUPAC naming 	<ul style="list-style-type: none"> Reference table Salt/sugar/burner/conductivity tester Molecular model set
10	Chm 2.2.5	Chm.2.2 Analyze chemical reactions in terms of quantities, product formation and energy	UNIT 6: Chemical Reactions <ul style="list-style-type: none"> Energy content Evidence of chemical change Write and balance equations Predict products Calculate empirical and molecular formulas, percent composition and hydrate composition 	<ul style="list-style-type: none"> Wool pads Hot/cold packs Reference table
10	Chm 2.2.4	Chm.2.2 Analyze chemical reactions in terms of quantities, product formation and energy	UNIT 7: Stoichiometry <ul style="list-style-type: none"> Calculate moles, particles, mass or volume Limiting reactant Actual/theoretical yield 	<ul style="list-style-type: none"> Reference table Various lab materials
5-7	Chm 3.2.5 Chm 3.2.6	Chm.3.2 Understand solutions and the solution process	UNIT 8: Solutions <ul style="list-style-type: none"> Properties Solubility diagrams Solution process 	<ul style="list-style-type: none"> Various solutions Solubility diagrams
5-7	Chm 3.1.1 Chm 3.1.2 Chm 3.1.3	Chm.3.1 Understand the factors affecting rate of reaction and chemical equilibrium	UNIT 9: Equilibrium <ul style="list-style-type: none"> Factors that affect rate Conditions at equilibrium/LeChatelier 	<ul style="list-style-type: none"> Various lab materials
5-7	Chm 3.2.2 Chm 3.2.3	Chm.3.2 Understand solutions and the solution process	UNIT 10: Acid and Bases <ul style="list-style-type: none"> Properties Titration Molarity 	<ul style="list-style-type: none"> pH scale Various materials to test pH Litmus paper & phenolphthalein Buret Calculator
5	Chm 1.1.4	Chm.1.1 Analyze the structure of atoms and ions	UNIT 11: Nuclear Chemistry <ul style="list-style-type: none"> Half-life Fission and fusion Alpha, beta, gamma 	<ul style="list-style-type: none"> Reference table Calculator